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ABSTRACT

In this supplement to the "K-12 Physical Education Curriculum Guide," developed by the Manitoba Department of Education, the focus is on perceptual-motor programs for children in kindergarten and the first grade. Section I contains a discussion of the rationale for perceptual-motor programs, a curriculum outline, and definitions of terms used in the guide. Section II describes gross-motor, perception, and fine-motor programs. In section III the motor development of children from infancy through early childhood is outlined. Screening and testing young children is the topic of section IV, and a description of the organization of a perceptual-motor program is presented in section V. Section VI offers ideas and suggestions for individual and group activities designed to improve motor skills. The appendixes in section VII include listings of gross-motor tests, basic equipment, and lesson plans. (JD)

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PERCEPTUAL MOTOR PROGRAMMING

A Supplement to the

K–12 Physical Education Curriculum Guide

Department of Education

Province of Manitoba

1981

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INTRODUCTION

A. Rationale

Interest in perceptual-motor programming in the school system has grown in recent years as a result of the increasing awareness among educators of the need for programs which support the individual developmental progress of primary-level children, and the recognition that modern urban lifestyles too often hinder this development by restricting children's opportunities for active physical play experiences.

Through carefully planned movement experiences, perceptual-motor programs support the natural developmental process by assisting young children to use their bodies more efficiently, which in turn can enhance their academic and social progress.

Within the physical education context, the aim of perceptual-motor programming is thus not to make all children super athletes, but rather to raise developmental levels to the point that the natural process of play will ensure continued development.

B. Curriculum

The recently published K-12 Physical Education Curriculum Guide indicates the emphases to be placed on the teaching of gross-motor skills during the kindergarten and grade 1 years. These skills, coupled with the development of perceptual skills in the classroom, from the core to the physical education curriculum during this early childhood period. Perceptual-motor activities bridge the two emphases by helping the child to move from the concrete activities to the abstract experiences of understanding symbols.

C. Definitions

The following terms are central in the discussion of perceptual-motor programming in this document:

1. Perceptual-Motor: One's ability to receive, interpret and respond successfully to sensory information (Capon).[1] The hyphenated term, says

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1. See Jack Capon, Perceptual-Motor Lesson Plans - Level 1 (Alameda, Calif.: Front Row Experiences, 1975).

Torpay, implies the inextricable link between motor development, perceptual development, and conceptual development.[2] Authors such as Piaget, Hunt, and Kephart do not see development as an automatic "unfolding" but a process delayed or accelerated by the organism's experiences with the environment.[3]

2. Perception: The receiving of input or stimuli into the body via the sense organs of taste, touch, sight, sound and hearing. Although input must be the initial concern, the emphasis of this publication will be on output. Resource teachers and other support staff are responsible for assisting in developing the perception skills.

3. Gross-Motor: The output or responsive movements of the large muscle groups of the body, often as the result of the stimulus received. The use of carefully planned movement experiences results in the acquisition of physical skills and fitness.

4. Fine-Motor: The output or responsive movements of the smaller muscles of the body, in particular those of eyes and fingers. Fine-motor control can only develop after there is a degree of gross-motor control, developing from the head down to the toes and from the mid-line to the body extremities.

5. Skill: The learned ability to bring about predetermined results with maximum certainty. (Knapp).[4]

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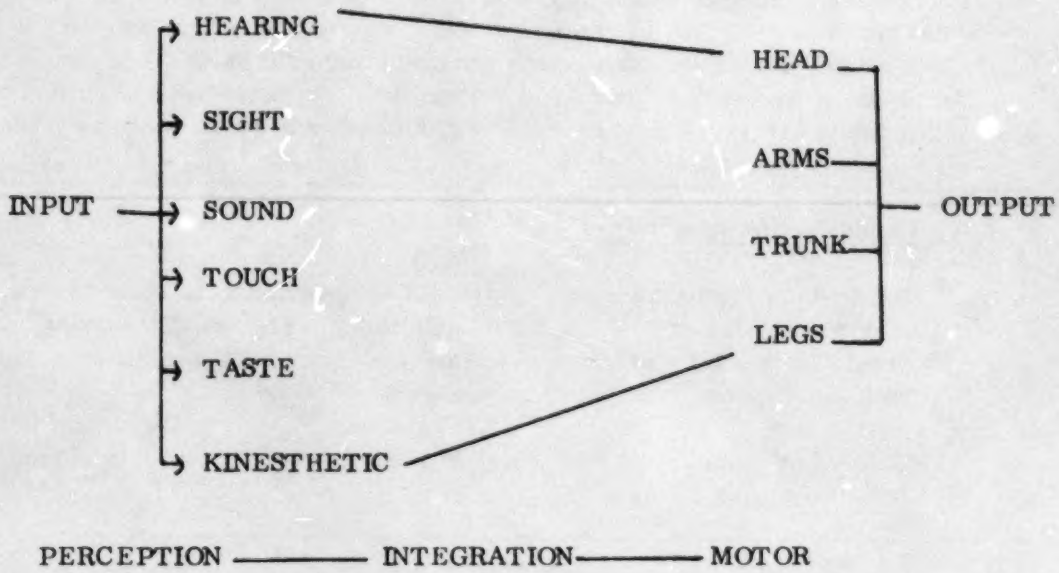
2. See James E. Torpay, Motor-Perceptual Development and Physical Education (Minneapolis, Minn.: The University of Minnesota Press, 1972).

3. See, for example, Newell C. Kaphart, The Slow Learners in the Classroom (Columbus, Ohio: Charles E. Merrill Books, 1976).

4. Barbara Knapp, Skill in Sport (London: Routledge and Kegan Paul, 1962).

Figure 1


HEARING
SIGHT
INPUT
SOUND
TOUCH
TASTE
KINESTHETIC
HEAD
ARMS
TRUNK
LEGS
OUTPUT
PERCEPTION
INTEGRATION
MOTOR

II

AREAS OF CONCERN

Perceptual-motor programs do not attempt to be responsible for all facets of child development. But the impact of such programs can have an effect upon the physical, social and intellectual growth of any individual. The nature of the program will vary according to the needs of the individual and individuals within the program. There is, however, a number of basic concepts dealt with in most programs.

A. Gross-Motor Programs

Gross-motor programs give each child an opportunity to strengthen a motor weakness or to fill a motor deficiency. The activities included should be carefully selected to ensure that meaningful practice occurs with the minimum disruption of other school activities.

The major components which are designed to develop efficient motor patterns are as follows:

1. Body Awareness

Activities which familiarize the child with the structure of his/her own body and its physical capabilities to move through space efficiently. The components of such a program include the following:

a) being able to name and recognize the parts of the body;
b) recognizing the relationship of those individual parts to the whole body;
c) being aware of laterality - right and left;
d) being aware of position and movement through space - up, down, forward, backward, etc.

2. Balance

Balance is the ability to hold the body in a certain predetermined position (static) and move through a predetermined series of bodily positions (dynamics). This ability to control physical position and movement is basic to all motor activity. Children should be exposed to a wide variety of balance activities.

3. Coordination

The ability of the body to adjust its position or motion according to the stimulus or signal the sense organ receives. The most important form of this activity is eye-hand coordination, in which the hands react to a visual stimulus. For example, catching a bean bag in the air involves the eyes tracking the bag in flight and the hands moving into the right position before closing to grasp it. Other coordination skills include the eye-foot activities which are used in games such as soccer.

4. Locomotion

Many basic movement patterns developed by the young child need to be enhanced through regular practice, because they are fundamental to the complex motor skills necessary in later life. In particular, the skills of creeping, crawling, climbing, walking, etc., must be developed to a mature level.

B. Perception Programs

The weaknesses of many children do not lie in their motor deficiencies but in their ability to receive stimuli via the sense organs. As several people can view a scene and perceive it differently, so can young children react differently to a particular stimulus according to how their brains receive that stimulus.

The most common forms of perception are visual, auditory and tactile. Often a stimulus of one form is augmented by a stimulus in another form, together strengthening the input process. Another important form of perception associated with motor activity is kinesthetic, the ability of the body via internal sense organs-proprioceptors-to be aware of both motion and position in space.

Perception programs are usually supported by resource teachers as they are seen to greatly enhance the development of academic skills. However since the end result of perception is often a motor response, the support of both motor and perceptual skills is provided in perceptual-motor programs. Recently many theories suggest that motor learning may indeed be the basis of all human cognitive and perceptual processes (Delacato; Kephart; Cratty).

Perception programs include pattern recognition, letter and number recognition, serial memory ability, number games and concepts of counting,

spelling and word games, and involve all of the senses - hearing, tasting, smelling, and moving (kinesthesis).

C. Fine-Motor Programs

Control of the large muscle groups develops before the child is able to gain control of the small muscles of the body. As the gross-motor programs support individuals identified as having difficulty in their development, so too do fine-motor programs assist either these same children at a later stage or other children whose only difficulty is at the fine muscle stage of development.

The major areas of concern to the teacher of primary children are the muscles involved in reading and writing. Consequently fine-motor activities are designed to help improve the child's skills in manipulation (manual dexterity) and tracking (ocular pursuit). These programs are often seen to be a regular part of the classroom curriculum, supported where necessary by resource teachers.

1. Manipulative Activities

a) Threading beads
b) Using scissors
c) Pegboards
d) Sorting activities
e) Pick-up sticks
f) Tracing
g) Piercing holes
h) Lacing cards
i) Clothes pegs

2. Tracking Activities

a) Suspended ball
b) Flashlight trace
c) Chalkboard routines
d) Joining the dots
e) Word cards
f) Sand tray
g) Balloon volley

III

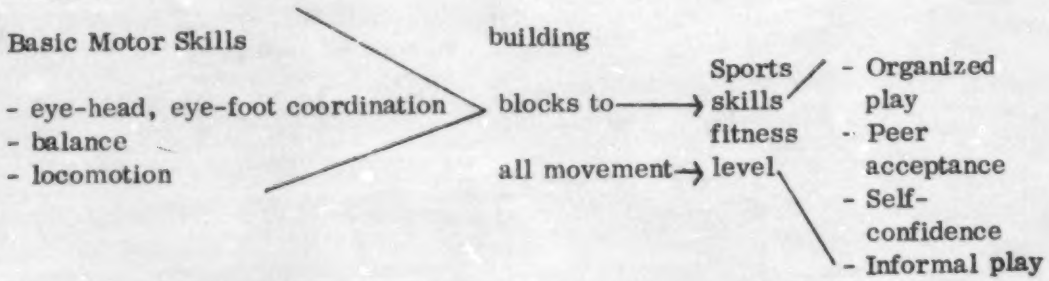
EXPECTATIONS

A. Intancy Through Early Childhood

The first movements of a newborn are involuntary actions known as reflexes. There are 36 reflexes crucial to normal motor development, 14 of which appear in the first year of life and enable a child to assume an upright position and to become mobile. These reflexes precede voluntary, controlled movement. The phasing-out of the primitive reflexes and phasing-in of voluntary movement is a complicated process which varies greatly among individuals. It depends on a variety of environmental as well as maturational factors.

Development during the first five years of life is crucial in determining how one will function in adolescence and adulthood. In this period, children are experimenting with the motor skills which form the basis for future movement performance.

Figure 2



Children need to experience a variety of ways of performing simple motor tasks. Motor performance at this stage seems to be a function of maturation rather than instruction, with trained children showing no higher a level of skill than untrained children.

B. Sequence of Skills

1. Locomotion

Generally a child will creep, then crawl, stand upright, and walk.

a) Walk

At one to two years old, children become proficient at walking, as the gait narrows and becomes rhythmical. At two years they still need to visually monitor their walk by watching their feet, but by three years this is no longer necessary.

b) Run

2 - 3 years	- can run, but lacks ability to stop and start quickly.
$4\frac{1}{2}$ - 5 years	- ability increases - reciprocal arm action.

c) Jump

2 years	- 2-foot take off.
3 - 4 years	- reasonable jumping skill.

d) Hop

$3\frac{1}{2}$ years	- hop 1 - 3 steps on preferred foot.
4 years	- hop 4 - 6 steps on preferred foot.
5 years	- improved balance, strength, endurance.
	- 8 - 10 hops on preferred foot.

e) Skip, Gallop

4 years	- beginning.
$6\frac{1}{2}$ years	- reasonable level of skills.

f) Balance (Dynamic)

3 years	- walk heel to toe on straight line.
4 years	- walk heel to toe on curved pathway (static).
5 years	- reasonable balance on 1 foot (5 seconds).

2. Skill with Balls

a) Throw - wide variety of styles in pre-school years (overhand, underhand, sideways).
- 5-6 years - child steps forward to throw
- weight shift as ball is released.

b) Catch - 5 years - 3-4 successful catches out of 5 (20 cm diameter ball).
- evidence of scooping and trapping ball against chest.

C. Motor Milestones

Use of chronological age is only a rough guideline due to the varying rate of development of different children.

1. 3 years

a) Walks straight line 61 cm long, heel to toe.
b) Hops three times on preferred foot.
c) Walks balance beam for short distance.
d) Throws ball 3 metres.
e) Can identify gross body parts.

2. 4 years

a) Shows adequate running form.
b) Walks line around periphery of circle.
c) Jumps with skill.
d) Walks balance beam.
e) Can identify gross body parts including knees, elbows, shoulders.

3) 5-6 years

a) Can broad-jump 61 to 91 cm.
b) Hops 4-1/2 to 6 metres in approximately ten seconds.
c) Balances on preferred foot six to eight seconds.
d) Can catch a large playground ball if it is bounced from a distance of 3-1/2 to 4-1/2 metres.
e) Can recognize right and left but usually can't identify these with accuracy.

D. Delay Factors in Motor Developments

1. Birth circumstances

a) Low weight

b) Prenatal condition of mother (e.g., excessive or inadequate weight gain, smoking, use of drugs)
c) Difficult labor.

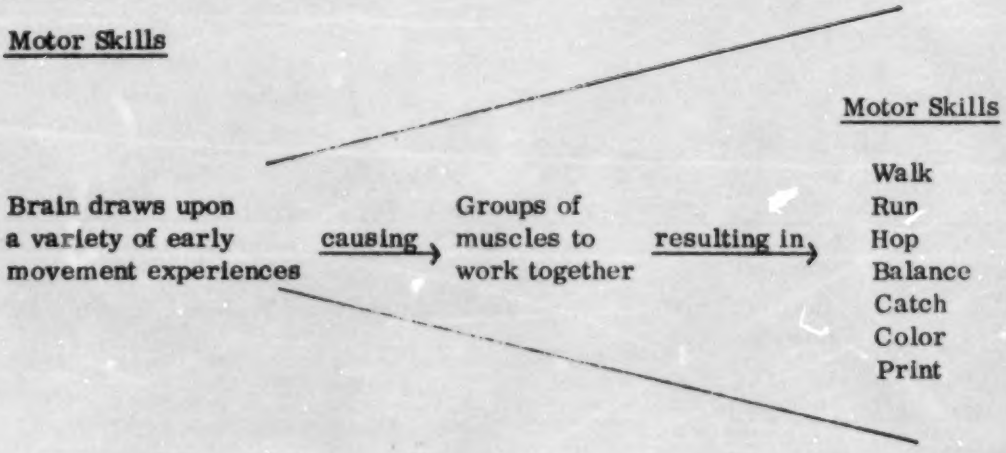
2. Family influence

The family can assist development by exposing the child to a wide variety of environmental situations, close to and around the house. A child learns by example and observation of what is happening in the immediate surroundings. Physical stimulation is needed right from birth, e.g., rocking, swinging, spinning, crawling. Physical restraint for various reasons (e.g., apartment restrictions, over-protection due to illness) may result in developmental delays. Sex differences and parental expectations are also factors in motor development.

Readiness in learning is dependent upon complex physical, mental and emotional variables. A degree of maturation is required before learning occurs. Negative experiences may result in such attitudes as lack of confidence and poor self-image, which inhibit maturation and therefore learning. Hence it is essential that pre-school children have a wide variety of stimulating and satisfying natural movement experiences prior to school entry.

Figure 3

Motor Skills



IV

SKILL ASSESSMENT

A. Screening

The first essential step in programming to meet the needs of the child is to follow one or more of the procedures available for assessing his or her motor skills. These procedures should be administered with the minimum necessary use of both time and resources.

Of course, the observant classroom teacher can usually identify signs of poor motor performance, such as clumsiness, odd gait, tripping, stumbling, constant bumping into furniture, and jerky non-rhythmical movements of limbs, etc. From such an observation a referral can be made to physical education resource personnel or other support personnel. Too often in such a procedure, however, the referral is not made early enough, for the sooner support can be given to the child the better are the chances of improved motor performance.

The better procedure is therefore to screen all Kindergarten children soon after school commencement, to identify both the motor strengths and weaknesses of the child in order to achieve better individualized programming.

Although there is a range of chronological ages within each classroom it is expected that children between the ages of four and one-half to five and one-half years can perform the following tasks with a reasonable degree of efficiency:

1. Balance

   a) Stand motionless on one foot for approximately six seconds. Repeat on other foot.
   b) Walk forward along a line about 10 cm in width for approximately 3 to 4-1/2 metres.

2. Locomotion

   a) Jump forward on both feet for a distance of approximately 3 to 4-1/2 metres.
   b) Hop on one foot 3 to 4-1/2 metres without stopping. Repeat on other foot.

3. Coordination

a) Catch an 18 cm playball thrown from a distance of approximately 3 metres. (Throw it above and below eye level to observe the eyes tracking.)

For ease of recording, only unsatisfactory performances are noted; a child weak on two or more tests is re-tested on a one-to-one basis at a later date. It is possible for three skilled adults to test a complete class of 20-26 students in 30-40 minutes. The addition of game activities prior to and following the screening helps to release student anxiety which might be present and gives the classroom teacher a chance to observe the children in a gymnasium/large space situation.

Figure 4

Name	R	L	Dyn	Both	R	L	Co-ord.	Test Required
Susan								
Mary								
John								
David								

B. Testing

Following the screening procedure individual motor performance tests are administered to those children whose performance in the screening procedure was unsatisfactory. There are many such tests available for teachers to use, including the following:

1. Perceptual-Motor Rating Scale (Kephart),
2. Frostig Developmental Test of Visual Perception,
3. Denver Developmental Screening Test,
4. Dayton Sensory Motor Awareness Survey,
5. Project ACTIVE Basic Motor Ability Test,
6. Oseretsky Tests of Motor Proficiency,
7. Purdue Perceptual-Motor Survey.

The test selected should be simple to administer and require the minimum of equipment and time. The results obtained from testing should be of an

objective nature and should become the basis of individualized program planning.

The Winnipeg School Division has for several years been successfully using a modification of the Purdue Perceptual Motor Survey, a component of a total screening system known as the Early Identification Program (EIP). It can be administered in approximately 15 minutes, requires only a small quiet space and a minimum of equipment. It is suggested that young children be tested in pairs, one observing the other and thereby becoming both aware of the testing components and less apprehensive of the testing situation.

The test consists of the following elements:

1. Identification of body parts and planes - the child touches each body part with both hands at the teacher's request.

2. Positioning of body relative to a chair - the child stands at the locations indicated by the teacher: in front, behind, beside, on, under, over.

3. Imitation of arm movement - the child copies arm motions performed by the teacher, including bilateral, cross-lateral and unilateral movements.

4. Static balance - the child stands unaided and motionless for a period of 10 seconds on either foot.

5. Dynamic balance - the child is requested to walk along a straight line (four inch tape on the floor) for a distance of 3 to 4-1/2 metres. Repeat if possible in a backward direction. Younger children will find walking backward more difficult.

6. Jumping - the child "bunny jumps" forward with feet together for a distance of 3 to 4-1/2 metres.

7. Hopping - the child hops forward about ten times on each foot. Let students choose order of preference.

8. Locomotion - the child walks, runs and skips freely around the room. Watch for mature movement patterns and unusual gaits.

9. Catching - the child catches a seven inch playball or sponge "Nerf" ball at a distance of approximately 3 metres. Give a variety of tosses

above and below eye level as well as a bounced delivery. At times direct the ball slightly to the left or right to observe the eyes track the ball's flight.

10. Printing - the child prints his/her name or draws another person. The teacher observes the child's grip and fine motor performance as well as recording the dominant hand. Several clues relevant to the child's development can be noted in this task.

11. Identification of R-L - ask the child to identify and name the hand used to print as well as identify other right and left body parts.

The recording throughout this testing procedure is kept to a minimum so that the teacher can concentrate on the movements and performance of the child. A simple one-page recording sheet has been developed which allows the tester to circle various areas of concern quickly. (See Appendix A, page 36.) The sheet also makes provision for noting other areas of concern, e.g., fitness level, posture, medical, etc.

The purpose of any assessment program is not to label weak performance but to use the information obtained to program for the needs of the individual. The EIP information obtained in gross-motor testing should be shared with personnel from other disciplines, e.g., speech therapy, social worker, reading clinician, school nurse, early childhood consultant, etc., so that a teaming approach can be developed to assist the child.

V

PROGRAM ORGANIZATION

A. Objectives

1. To develop a greater awareness of the body - its capabilities and limitations.

2. To improve the motor skills of balance, eye-head and eye-foot coordination.

3. To integrate balance, eye-head and eye-foot coordination into a smooth rhythmic locomotor pattern, e.g., walking, hopping, running, skipping.

4. To improve listening skills and the ability to follow directions.

5. To increase attention to a set task.

6. To build or reinforce a positive self-image by providing success-oriented activities.

7. To establish socially acceptable interaction with others, e.g., co-operate, share, follow rules.

8. To use movement experiences to reinforce and to prepare for concepts that relate to distance, direction, size and form.

B. Space

Perceptual-motor programs can be held in a variety of settings in the school building, e.g., empty classrooms, resource room, gymnasium, stage, multi-purpose room, isolated hallway. Factors to consider when timetabling are the number of children involved, availability of area for free movement, distractions, noise level, and adequate room for equipment.

C. Time

The frequency of the perceptual-motor program varies from school to school. Some children take part on a daily basis. Other schools provide programming on alternate days to the regular physical education program. Experience has shown that children progress more rapidly if the

perceptual-motor program is regular and frequent. The length of each session should be from a minimum of 15 minutes to 30 minutes per child.

D. Types of Program

Each school or child has certain characteristics which determine the method in which a remedial perceptual-motor program is presented. Some examples of successful programs are as follows:

1. Individual	Pros	Cons
- one child - one program leader	- individual attention - requires small space - easy to monitor child's progress	- child lacks contact with others - limited as to types of activity, e.g., difficult to include dance and rhythm
2. Small Groups		
- program leader with small groups of children	- individual attention possible without whole focus on one child - co-operative inter-relationships with other children - station rotation provides variety of activities	- more organization is required - large floor area is necessary, e.g., gym, multi-purpose room - likely need extra help with children, e.g., student or parent volunteers

3. Whole Group Approach

In some schools the perceptual-motor approach has been to involve whole classes in a developmental motor program. In this case the class is timetabled in the gym or multi-purpose room. The nature of the program is not remedial - all children participate in all activities at an appropriate level. The teacher is usually assisted at various stations by parent volunteers.

E. Personnel

1. Program Leader

The program leader is the most important ingredient in successful perceptual-motor programming. Some examples of program leaders are: resource teacher, physical education specialists, teacher aides, student volunteers (elementary and/or high school), community volunteers, parents, classroom teachers. Look for the following personality characteristics when selecting a program leader: warm, friendly, encouraging, creative, patient, reliable, consistent. It will be necessary to train the leaders for the perceptual-motor program. Training should include the following:

a) Familiarization with the selection criteria;
b) Familiarization with the program objectives;
c) Access to a variety of motor activities and an understanding of how to adapt or modify activities to suit the needs of the children;
d) Training in brief record keeping to monitor progress and improvements.

2. Program Guidelines

The following guidelines for working with young children are useful when training student or community volunteers who are not accustomed to dealing with children.

a) Try to relax, enjoy, and make it fun.
b) Learn names, use them often, and make sure the child knows and uses yours.
c) Operate at the child's level: crouch, kneel, look into the child's face to get full attention.
d) Give instructions clearly. Speak slowly and repeat if necessary.
e) Check often for understanding by asking the children what they are trying to do.
f) Give positive reinforcement, e.g., verbal - Good work!
- That's it!
non-verbal - pat, smile, use the child's idea for another activity.
g) Keep children active by providing a variety of activities and time for repetition and practice.

h) Stimulate language development whenever possible.
i) Relate physical activities to academic activities whenever possible (e.g., recognition of letters, numbers, shapes).

F. Equipment

Equipment is necessary for a perceptual-motor program but need not be large or expensive. Many of the most successful pieces are homemade. A variety of equipment is important so that the learning environment can be changed or manipulated for proper skill development. The safety factor is an important consideration. Equipment used must be free of slivers or projections, appropriate to the developmental level of the children, and well maintained.

Suggested Equipment

Large	Small (portable)
Balance Beams	Carpet Squares (rubber backed)
Balance Bench	Hoops
Mats	Traffic Cones
Vaulting Box	Ropes
Ladder	Bowling Pins
Tramp-O-Let Kiddie Bounce	Geometric Shapes
Jump Box	Bean Bags
Scooter Boards	Wool Balls
	Scoops
	Dressmaker Elastics
	Tin Can Stilts
	Grid Mats
	Rubber Ball (18 cm)
	Rhythm Sticks
	Frisbee
	Footprints (rubber)

VI

PROGRAM IDEAS

The following section includes specific motor activities appropriate for perceptual-motor programs. The activities are arranged from simple to more complex, providing for progression and challenge as the child works through the program.

A. Body Awareness

1. Level 1

a) Close eyes and touch body parts
- Mouth, ears, chin, neck
- Shoulders, elbows, wrist, hand, fingers, thumb
- Chest, stomach, back, hips
- Knees, feet, heels, toes.

b) Touch body parts with other body parts
- Nose to knee
- Chin to chest
- Ear to shoulder
- Hands to hips
- Elbow to knees
- Nose to toes
- Wrist to ear
- Elbow to leg
- Toes to toes
- Chin to wrist
- Wrist to ankle
- Fingers to shoulders
- Wrist to back
- Heel to heel

c) Moving body parts
- Put finger up.
- Put head down.
- Move head back.
- Put head between legs.
- Put arms between legs.
- Put arms in front of you.

d) Move
- Just your feet.
- Just your fingers.
- Just your head.
- Bend at the waist. How many ways can you move your waist?
- Move the biggest part of your body.
- Move two body parts above the waist.
- Move two body parts below the waist.

e) Lie on a large piece of paper and have your partner trace the outline of your body. Identify body parts as listed in (a).

2. Level 11

a) Touch body parts to surroundings
- Head to floor
- Hands to wall
- Knees to floor
- Back to wall
- Ankles to wall
- Ear to chair
- Nose to wall
- Shoulder to floor
- Stomach to floor

b) With a chair
- Go under chair. How many different ways?
- Go over chair. How many different ways?
- Stand behind the chair.
- Stand beside the chair.
- Stand in front of the chair.
- Jump off the chair. How many different ways can you jump off the chair? (forward, backward, sideways, high, star).
- Practice jumping with safe landing (4-point landing - hands and feet touch floor at the same time).

c) With a partner
- Move near one another.
- Move far from one another.
- Meet and shake hands.
- Stand side by side.
- Lead partner then switch.
- Follow partner (shadowing: follow the leader).
- Play Simon Says - do this do that (mirroring).
- Face partner, touch different body parts.

d) Body Shapes: Make yourself
- Curved like an S,
- Straight and narrow like an arrow,
- Straight and wide like a star.

B. Locomotion and Coordination

1. Running

a) Points to Note

- Forward knee left.
- Relaxed arms.
- Long, loose body.
- Overall light and relaxed.
- Ease and economy of effort.

b) Activity Suggestions

- Free running on the spot.
- Slow-motion running on the spot.
- Running on the spot - fast, slow, varying speeds.
- Free running in gym - changes in directions on signal (clap or drum beat) - practice quick stops - run and freeze.
- Running forward, sideways.
- Running backwards slowly, then fast.
- Running slowly zigzag through an obstacle course (mats, benches, hoops, etc.).
- Running quickly zigzag through an obstacle course.
- Running in pairs.
- Running in patterns, e.g., in a straight line, round a curve, letters of the alphabet.

2. Jumping

a) Points to Note

- Take off on two feet, land on two feet.
- Lightness and resilience or "give" (in the joints of the knees, ankles and foot).
- Some height from floor.
- Relaxed arms.

b) Activity Suggestions

- Jump off low object, e.g., folded gym mat, stair, wooden block, small jump box. Stress safe landing: knees bent on landing, arms extended forward to break fall if tumble forward.
- Do several jumps in succession.
- Jump as high as you can and make a safe landing.
- Jump and land as softly as you can.
- See how far forward you can jump.
- Take a short run, then jump taking off and landing on two feet.
- Jump from side to side.

- Jump and turn; jump in place and do a half turn.
- Jump and make a shape in the air, e.g., long, wide, star, twisted. Don't forget your safe landing!
- Jump over lines on the floor using a two-foot take-off.
- Jump on the spot with a bean bag between knees. Try this moving forward.
- Place several skipping ropes on the floor - jump over the ropes with a two-foot take-off and landing.
- Jump over a 7-1/2 cm-wide space with both feet.
- Jump over a 15 cm-wide space with both feet, then over a 30-1/2 cm-wide space.
- Jumping from heights. Emphasize a controlled landing by bending the knees and ankles:
  Jump and land from a 7-1/2 cm height.
  Jump and land from a 30-1/2 cm height.
  Jump and land from a stable chair.

3. Hopping

a) Points to Note

- One-foot take-off; one-foot landing.

b) Activity Suggestions

- With a teacher's help, hop on the spot while holding partner's hands.
- Hold back of a chair and hop on the spot.
- As in point 2: change feet and hop on the other foot. Repeat the exercises several times.
- Hop in place. How many hops can you do in a row? Try other foot.
- Hop to an obstacle a short distance away and hop around it.
- Hop forward on the right foot ten times. Repeat on the left foot.
- Hop over a line. Relax then change feet. Try going forward then backward.
- Hop backwards three times. Repeat on other foot.
- How many backwards hops can you make? Try first on the right foot then on the left.
- Turn on the spot as you hop.
- Hop forward, backwards, and sideways, on signal from the teacher.
- Initiate a specific hopping pattern, e.g., two hops on right foot, one hop on left. Pattern given by the teacher or partner.

- Try hopping a zigzag pattern over lines on the floor.
- Use a ladder from the climber or mark out the lines on the floor. Children hop or jump into the spaces between the rungs.

4. Skipping

a) Activity Suggestions

- Skipping forward.
- Skipping backwards.
- Skipping to the right.
- Skipping to the left.
- Skipping up an incline.
- Skipping down an incline.
- Skipping up stairs.

5. Activities with Hoops

a) Walk around the outside edge of a hoop.
b) Run around the outside edge of a hoop.
c) Skip around the outside edge of a hoop.
d) Jump around the outside edge of a hoop.
e) Try standing in a hoop and jumping out in various directions.
f) Try to stand in a hoop and jump upward.
g) Jump in and out of the hoop continuously with various rhythms (slow - fast - slow, etc.).
h) Stand astride the hoop and jump upward, clicking your heels together.
i) Do a slow run, and jump to land in the hoop in a crouch position.
j) Hop into and out of a hoop continuously.
k) Walk backwards into the hoop.
l) Jump backwards into the hoop.
m) Try to stand on the hoop and jump across the middle to the other side.
n) See if you can go any other way around or over your hoop.
o) Lift the hoop over your head and return it softly to the floor.
p) Lift the hoop over your head and have your feet inside it when you've returned it to the floor.
q) Lift the hoop off the floor with one hand.
r) Lift the hoop off the floor with a two-hand grip and one foot. Try with the other foot.
s) Balance on one foot while you turn your body around with both hands and one foot holding the hoop off the floor.

t) See how high you can lift the hoop.
u) Try to stand on one side of the hoop and jump sideways to the other edge.

6. Balloon Activities

a) Keep balloon up in the air.
b) Experiment, making hard hits and soft taps.
c) Keep balloon up using different body parts - e.g., head, elbows, back of hands, knees, foot.
d) Make up simple sequences:
- two taps, catch;
- tap--hand, elbow, hand;
- tap--hand, knee, hand, catch.
e) Do two taps, then tap to a partner:
- first with hands
- then with paddle bats, rulers, books, etc.
f) Balloon volleyball over a desk or table - three hits on either side, then send it to opposing team.

7. Ball Activities (Playground size ball)

a) Bouncing

- Freely
- Using one hand
- Using alternate hands
- On the spot
- On the move
- With body in different positions, e.g., kneeling, balance positions
- At different speeds on the spot
- At different speeds on the move
- At varying heights
- In different directions
- Make a sequence involving two of the above
- Combine with other activities
- Making patterns - child moves around ball
- ball moves around child
- Working with a partner.

b) Throwing and Catching

- Freely
- With two hands

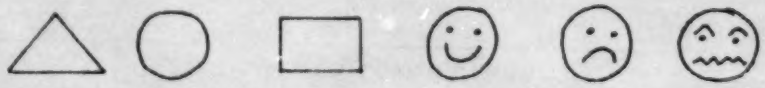
- On the move
- With one hand
- High
- Low
- In front of the body
- To the side
- Combined with bouncing
- Combined with hitting
- With a partner
- Against a wall - bounce first, then catch
- With a target
- Throwing for distance.

8. Yarn Balls

Level 1

a) Toss and catch
   - With two hands
   - Throw high
   - Throw low (small)

b) Throw at a target
   - Against a wall target (aim at colours, shapes, numbers, letters)
   - You may have to make targets,

e.g. 

c) Throw into a target - change distances - use wastepaper basket, loop, etc.

d) Keep yarnball in air by batting it with
   - Two hands
   - One hand
   - Paddle

e) Toss and catch
   - Toss - clap - catch
   - Toss - jump - catch

Level 11

f) Eye-foot coordination
- Push yarnball across room using alternative feet
- Kick yarnball at a target
- Move yarnball with feet in a way other than kicking (e.g., balance on foot, hop with it between feet)

g) Balance yarnball on different body parts and move with it
- Elbow
- Shoulder
- Head
- Neck
- Knee
- Back
- Feet
- Front
- Side

h) Add long tail of wool to middle of yarnball for twirling activities
- Twirl yarnball close to floor.
- Twirl in front of body.
- Twirl beside body.
- Twirl in right hand, twirl in left hand.
- Twirl and walk forward.
- Twirl and walk backward.
- Twirl and walk along line or bench.

i) Yarnball and Scoops
- Pick up yarnball with scoop.
- Catch your leader's throw with the scoop.
- Throw up and catch in scoop.
- Throw at a target with scoop.
- Throw and catch in scoop - switch hands.

j) Partner activities with yarnballs
- Toss and catch with partners.
- Toss and catch both using scoops.
- Toss and catch over barrier, e.g., net.

C. Eye-Hand Coordination

a) Ball and Bean Bag Activities - Level 1

1. Partners sitting on the floor - roll the ball back and forth.
2. Using a suspended Cosom ball, tap the ball ten times in a row.
3. Throw and catch a yarnball ten times.
4. Roll the ball between the legs of a chair five times.

5. Throw a bean bag at a large target. Hit it ten times.
6. Knock the bowling pins down.
7. Partners 3 metres apart bounce and catch the ball ten times.
8. Throw a bean bag into a large container ten times.
9. Try catching a bounced ball after clapping once.
10. In partners, throw and catch a bean bag.
11. Throw a bean bag up and catch it with two hands. Repeat five times.
12. Throw a large ball against the wall, let it bounce, catch it. Repeat five times.
13. Throw a bean bag back and forth between the left and right hands ten times.
14. Throw a bean bag and catch it in one hand; repeat five times. Use alternate hand five times.
15. Throw a ball against a wall and catch it five times.
16. Bounce the ball using two hands five times in a row.
17. Throw the ball up high, let it bounce and catch it (five times).
18. Try to keep a balloon up in the air for five seconds.
19. Throw the ball up in the air and catch it (five times).
20. In partners, put a penny on a mark on the floor and bounce and catch. Try to hit the mark ten times.
21. Throw a bean bag up and catch it while walking. Repeat ten times.
22. Throw a bean bag at a target on the wall five times.
23. Throw a ball against the wall, clap and then catch it five times.
24. Bounce the ball with two hands back and forth over a line five times.
25. Bounce the ball using one hand and then the other, ten times.
26. Throw the ball against the wall - jump over the ball after it hits the floor.
27. Throw a bean bag up and catch it on a paddle bat five times.
28. Bounce the ball from one hand to the other ten times.
29. Bounce the ball into a basket five times.
30. Bounce the ball while trying to kneel down five times.
31. In partners, play catch using a bean bag and a small javex scoop (ten times).
32. Hit a small ball against a wall using a paddle bat (ten times).
33. Keep a ball up using a paddle bat - five hits in a row.
34. Run, throw your ball up, and catch it ten times.

D. Balance Activities

These ideas can be used with lines on the gym floor. Once the child manages to maintain balance on the lines the degree of difficulty can be increased by repeating the activities on the wide side of the balance bench. A double tape line down the centre of the bench would be useful. To increase the degree of difficulty again the activities could be done on the balance rail available by turning the gymnastic bench over.

1. Level 1

a) Walk forward heel to toe on a line 15 steps.
b) Balance for five seconds on four body parts.
c) Balance on two feet and one hand for five seconds.
d) Balance for five seconds on left knee and left hand.
e) Balance on left foot and two hands for five seconds.
f) Balance for five seconds on right knee and right hand.
g) Stand on the right foot for ten seconds.
h) Run backwards across the room.
i) Gallop across the room, left foot leading.
j) Walk on tiptoes for ten steps and then on heels for ten steps.
k) Balance on left foot for ten seconds.
l) Move sideways across the room.
m) Balance on a line, heel to toe for ten seconds.
n) Gallop across the room, right foot leading.
o) Hop on two feet across the room.

2. Level 2

a) Walk heel to toe on a line, balancing a bean bag on your head.
b) Hop in place on left foot ten times.
c) Walk heel to toe backwards on a line.
d) Skip across the room.
e) Walk forward on a bench - wide side up.
f) Hop on right foot for ten hops in a row across the room.
g) Walk backwards on a bench - wide side up.
h) Step over three bean bags placed on the bench while walking forward.
i) Hop in place on right foot ten times.
j) Go along the bench on your left side, then right side.

3. Level 3

a) Walk forward on the bench - narrow side up.
b) Hop on two feet zigzag over a line ten hops.
c) Walk sideways along the narrow side of the bench.
d) Zigzag hop on one foot and then the other over a line ten times.
e) Walk backwards on the narrow side of the bench.
f) Balance a bean bag on your head while moving forward on the bench.
g) Cross-over steps across the room.
h) Walk forward on the narrow side of the bench and go through a hoop.
i) Hop in and out of hoop ten times.
j) Balance on one foot with eyes closed for five seconds.

k) Partners start at opposite ends, walk to middle, pass each other and continue to end of beam.
l) Place hands on beam, have partner hold legs (as in wheelbarrow race) and walk to end of beam.

4. Additional Activities

a) With arms held sideward, walk to the middle, turn around and walk backward.
b) Walk forward to the middle of the beam, then turn and walk the remaining distance sideward left with weight on the balls of the feet.
c) Walk to center of beam, then turn and continue sideward right.
d) Walk forward with left foot always in front of right. Walk forward with right foot always in front of left.
e) Walk backward with left foot always in front of right. Walk backward with right foot always in front of left.
f) Walk forward with hands on hips; walk backward with hands on hips.
g) Walk forward and pick up a chalk eraser from the middle of the beam.
h) Walk forward to centre, kneel on one knee, rise and continue to end of beam.
i) Walk forward with eraser balanced on top of the head; walk backward with eraser balanced on top of the head.
j) Place eraser at centre of beam. Walk to centre, place eraser on top of head, continue to end of beam.
k) Have partners hold a wand 30 cm above the centre of the beam. Walk forward on beam and step over the wand. Walk backward and step over wand.
l) Hold wand at height of one metre. Walk forward and pass under the bar. Walk backward and pass under the bar.
m) Walk backward on the beam with hands clasped behind the body.
n) Walk forward on the beam, arms out on the sides, with an eraser on the back of each hand. Repeat, with an eraser on the palm of each hand.
o) Walk on the beam backward, arms held sideward, palms down, with an eraser on the back of each hand. Repeat, palms up, with an eraser on the palm of each hand.
p) Walk the beam sideward right, weight on balls of feet. Walk the beam sideward left, weight on balls of feet.
q) Hop on right foot, the full length of beam. Hop on left foot, the full length of beam.

r) Hop on right foot, the full length of beam, then turn around and hop back. Hop on the left foot full length of beam, then turn around and hop back.

s) Walk to middle of beam, balance on one foot, turn around on this foot and walk backwards to end of beam.

t) Walk to middle of beam left sideward, turn around and walk to end of beam, right sideward.

u) Place eraser at middle of beam, walk out on it, kneel on one knee, place eraser on top of head, rise, turn around and walk backward the remaining distance.

v) Walk the beam backward with an eraser balanced on the back of each hand.

w) Place eraser on middle of beam. Walk out to it, kneel on one knee, pick up eraser and place it behind you on the beam, rise and continue to the end.

x) Hold wand 38 cm above beam. Balance eraser on head, walk forward stepping over wand. Repeat, walking backward, sideward left and sideward right.

y) Hold wand one metre high. Walk forward, hands on hips, and pass under the bar. Repeat, walking backward.

z) Fold a piece of paper at the right angle so it will stand on the beam at the middle. Walk to paper, kneel, pick it up with teeth, rise and walk to end of beam.

5. Balancing with Eyes Closed

a) Walk beam forward, eyes closed.

b) Walk beam sideward, eyes closed.

c) Walk beam backward, eyes closed.

d) Stand on beam, feet side by side, eyes closed and record number of seconds balance is maintained.

e) Stand on beam, one foot ahead of the other, eyes closed, and record number of seconds balance is maintained.

f) Stand on right foot, eyes closed, and record number of seconds balance is maintained.

g) Stand on left foot, eyes closed, and record number of seconds balance is maintained.

h) Walk beam sideward left, eyes closed.

E. Games

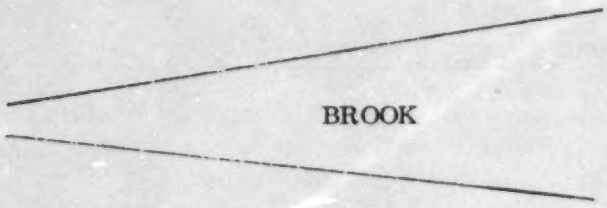
The following games have been selected as appropriate opening and closing activities for gross-motor programs. The games have been grouped into two categories - body image and space awareness. They require low organization, limited space, a small number of participants and easy-to-obtain equipment.

1. Body Awareness Games

a) Jump the Brook

Two lines are made with masking tape along the floor to represent a brook. Rather than being parallel the lines become increasingly farther apart. The children are encouraged to begin by jumping the brook where it is narrow and then to jump at wider and wider places unless they 'fall in'. Children landing in the brook are 'sent home' to put on dry shoes and socks; they go home, pretend to take off their shoes and socks and put on dry ones, then re-enter the game. Children enjoy this procedure, and it does not keep them out of the game for missing a jump. Encourage children to jump only in one direction so as to avoid any collisions.

Figure 5



b) Sticky Popcorn

The children begin this game by popping about the gym as individual pieces of sticky popcorn. When one piece of popcorn comes in contact with another piece, they stick together. Once "stuck", they continue to pop around together until they all end up in a big popcorn ball.

c) Bean Bag Curling

Each child has a partner and a bean bag. Partners stand an equal distance from the wall. They take turns throwing or sliding their bean bag towards the wall. The objective is to get the bean bag as close to the wall as possible without its actually contacting the wall. The closest throw to the wall gets a point; first child to accumulate ten points wins the contest.

d) Beat Your Own Record

Ropes are laid lengthwise evenly about general space. On the signal the children run about general space jumping over the ropes as they go. Each time they jump a rope they give themselves a point. The game lasts for one minute. After a rest the game is repeated and the children attempt to beat their own records.

e) Helicopter

Children are in groups of two; each pair has one skipping rope. One child sits down and swings the rope round and round him like a helicopter. It is important that the far end keeps contact with the ground so the rope does not get too high. The other partner, standing within the range of the rope, attempts to jump it each time it passes. When a jump is unsuccessful, partners switch places.

f) Balloon Togetherness

In this game a balloon is shared by two children. The children are asked to hold the balloon between them without using their hands. They can see how many different ways they can balance the balloon between them (e.g., head to head, side to side, stomach to stomach, back to back, and so on). They can also attempt to travel a certain distance with the balloon supported between them.

g) Balloon Keep It Up

Children are in scatter formation. Each child has a balloon. The objective is to keep the balloon up without using the hands. The children should be encouraged to use a variety of different body parts to keep the balloon up. They may play a game against themselves and attempt to beat their own record of hits to keep the balloon up. If the balloon falls after ten hits, for example, they will pick it up and start again, this time aiming for 11 or 12 hits.

2. Space Awareness Games

a) Tails

Children begin in scatter formation, each child with a 'tail' (cloth) extending from the waist band. With the signal to begin the children attempt to collect tails from others as well as try to retain their own. A child whose tail is taken is not out, but only has to replace it with a captured tail. Children may not hold on to their own tail and must observe the neutrality of others replacing their own.

b) Frozen Bean Bag

This is an active game of helping. All the children begin by moving around the gym at their own pace with a bean bag on their heads. The teacher may want to change the action by asking the children to go backwards or sideways. Children are frozen when their bean bag falls off. They can only be freed if another child picks up their bag and places it back on their head, without losing their own bean bag. At the end of the game the children may be asked how many times they helped friends.

c) Follow Me

Children follow the teacher (who walks, jogs, hops, etc.), but if the teacher turns around the children must sit down as quickly as possible so as not to be caught standing. After several turns the teacher selects a new leader from the children who have sat down most quickly. The game is more exciting if the leader occasionally fakes a turn.

d) Colors

Divide the class in four equal groups: blue, red, yellow and green. Children begin in scatter formation, each wearing a color band. Teacher calls out a color (e.g., blue) and all the children wearing that color are IT. They try to tag all the children wearing the other colors. Those tagged must sit on the side until all are caught. When everyone is caught the children all begin in scatter formation again and the teacher will call a new color.

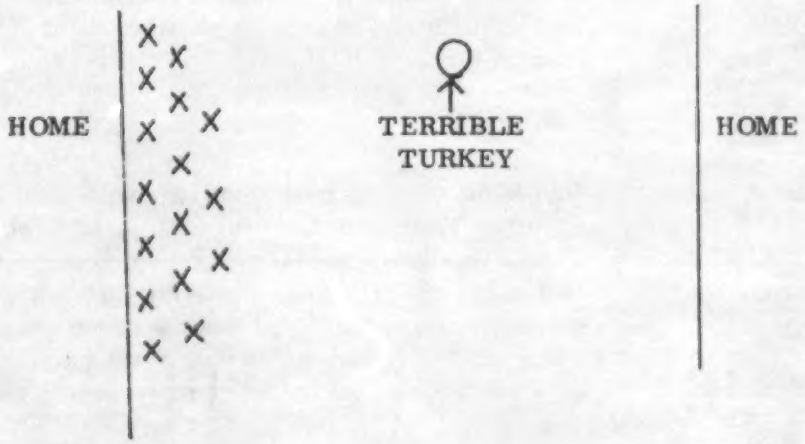
e) Big Snake

Children start by making a two-people "snake" that slithers across the floor on its belly. They soon connect up for a four-people snake, and eight-people snake and so on until the whole group is one big snake. At various lengths, the children like to see if they can turn the whole snake over on its back without coming apart. The snake can wiggle and hiss its way across a forest, and go over mountains, through holes and up trees, or may curl up and go to sleep. It takes a coordinated snake to do these last two feats. What children seem to enjoy most is getting the whole snake together.

f) Who's Afraid of the Terrible Turkey

Children begin by standing on one goal line a few metres from the wall (safety). The Terrible Turkey stands in the middle of the play area and asks "Who is Afraid of Terrible Turkey?" Players reply "Not I." The Terrible Turkey replies "Oh yes you are" which is the signal for players to attempt to run to the opposite goal line without being tagged. Those tagged become helpers of the Terrible Turkey. When about half the children have been caught the Terrible Turkey selects a new "TT" from those not caught and a new game begins.

Figure 6



VII

APPENDICES

A. Gross-Motor Tests
B. Basic Equipment
C. Lesson Plans
D. Bibliography

Appendix A

WINNIPEG SCHOOL DIVISION NO. 1
GROSS MOTOR CHECKLIST

NAME _____ ROOM _____ GRADE _____ BIRTHDATE _____

SCHOOL _____ TEACHER _____ TEST DATE _____

Satisfactory	Fitness	S - Satisfactory from previous test
At Risk	Posture	Emphasize - Body Image
Include	Medical	- Balance
Continue	Discontinue	- Locomotor
Sports Skills	Transferred to _____	- Eye-Hand Coordination

TEST ITEMS		COMMENTS
Identification of body parts planes		language, hesitates, front, back, sides, hips, wrists, ankles, elbows, shoulders, knees, etc.
Positioning body/chair		hesitates, only in relation to me, behind, beside, in front of
Hand used to print		no preference, poor grasp
Identification of R-L		hesitates, reverses, does not know
Imitation of arm movement		not exactly, hesitates, inconsistent
Static balance - right		tense, unsteady, shaky, extraneous movement
Static balance - left		tense, unsteady, shaky, extraneous movement
Dynamic balance - forward		tense, unsteady, shaky, extraneous movement, rushes, no cross over, falls away, spacing, does not cross midline
Dynamic balance - backward		tense, unsteady, shaky, extraneous movement, rushes, no cross over, falls away, spacing, does not cross midline
Jump on two feet		tense, laboured, rushes, unrhythmical, feet uneven, awkward
Hop on one foot - right		tense, extraneous movement, laboured, rushes, unrhythmical
Hop on one foot - left		tense, extraneous movement, laboured, rushes, unrhythmical
Other transport skills walk, run, skip . . .		tense, poor arm action, poor knee action, toes in, toes out, laboured, awkward
Eye-tracking ability		poor, glasses
Eye-hand coordination (catching)		fear of ball, shy of ball, traps, scoops, poor timing, tense, inconsistent, misses with varied throw

NOTE: This assessment should not be considered accurate one year after date. Re-assessment should be done when concern exists.

ST. BONIFACE SCHOOL DIVISION NO. 4

PERCEPTUAL-MOTOR HANDICAP
INITIAL SCREENING TEST

The three tests listed below are to be used to screen children with perceptual-motor handicaps:

I. Static Balance
II. Jumping over a Barrier
III. Jumping and Hopping Forward

Guidelines for Administering the Tests:

1. Children should be tested one at a time.
2. Each test item should be demonstrated by the teacher.
3. The teacher should not coach or encourage the child during the test.
4. If the child fails to fulfill the requirements of a test on the first attempt, a second chance may be given.

The Tests:

I. Static Balance (The balance test is the most predictive of children with moderate perceptual-motor deficiencies).

   a) The child balances on his preferred foot, other foot tucked behind balancing leg, eyes open, with arms folded.
   b) A 5-6-year-old child should be able to balance 4-5 seconds without touching floor with free leg. Seldom can a 5-year-old balance for 10 seconds.

II. Jumping over a Barrier (A barrier of 10 inches high is used, e.g., a rope tied between two chairs).

   a) The child stands within $1\frac{1}{2}$ feet of the barrier and using a two-foot take-off jumps over the barrier.
   b) A run should not be permitted before the jump.
   c) The child must not step over the barrier.

III. Jumping and Hopping

a) Jumping - Child jumps forward three times with both feet together.
- Proper arm lift should be shown when teacher demonstrates the jump.
- The child should be able to get both feet off the floor simultaneously.

b) Hopping - The child hops forward on preferred foot for three consecutive hops.

ST. BONIFACE SCHOOL DIVISION NO. 4

PERCEPTUAL-MOTOR HANDICAP SCREENING TEST

NAME _____

AGE _____

SCHOOL _____

ITEM	November	May
1. Static Balance - 5 seconds on preferred foot		
2. Jumping Barrier - 10 inches jumping floor level		
3. a) Jumping b) Hopping		

Comments (November) _____

_____

_____

Comments (May) _____

_____

_____

Kindergarten Teachers

Please keep this form on hand during the year. The child should be re-tested in May. The resource teacher and physical education teacher should be notified about students who do poorly. These children should then be tested (Purdue) early in grade one to see if they require extra help in the perceptual-motor program.

ALEXANDER ROSS SCHOOL

PERCEPTUAL-MOTOR EVALUATION FORM

DATE: _____

STUDENT: _____ YEAR: _____

BIRTHDATE: _____ TEACHER _____

Evaluation: 0 = Poor, 1 = Low, 2 = Average, 3 = Good

Tasks	Ratings	Comments
A. BODY IMAGE		
1. Touch:		
a) head		
b) knees		
c) shoulders		
d) ankles		
e) elbows		
f) ears		
g) eyes		
2. Oral directions - Touch:		
a) left hand to right shoulder		
Grades b) right knee to floor		
2 & 3 c) right hand to left knee		
only d) both hands to right foot (may bend knees)		

Tasks	Ratings	Comments
B. LATERALITY		
1. Angels in the snow		
a) lying on back		
b) lying on stomach		
2. Jumping Jacks		
C. SPATIAL ORIENTATION (Directionality)		
1. Obstacle course		
D. BALANCE		
1. Static:		
K-3 a) stand 2 feet together with eyes closed (3-5 sec.)		
K-1 b) stand on preferred foot, arms stretched out to side (5 sec.) eyes open		
2-3 c) stand on preferred foot with arms crossed over chest - (8 secs.) eyes open		
d) try (b) with eyes closed		
2. Dynamic:		
a) forward walk - 1 foot in front of the other - balance beam		
b) backwards walking on wide side of balance beam		
E. LOCOMOTION AND AGILITY		
1. Skipping rope		

Tasks	Ratings	Comments
2. Run - stop - skip - stop - hop two feet - stop - hop one foot (Sequencing)		
3. Rhythmic hopping - alternating legs		
4. Hurdle jump - start with 1 foot		
F. EYE-HAND COORDINATION		
1. Ball Catch - 6-8 ft. away		
2. Ball Throw -		
a) K - 12 ft.		
b) 1 - 19+ ft.		
c) 2 & 3 - i) boys 35 ft. ii) girls 25 - 28 ft.		

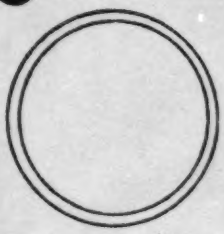
* Needs complete test on body image (Cratty)

Yes _____ No _____

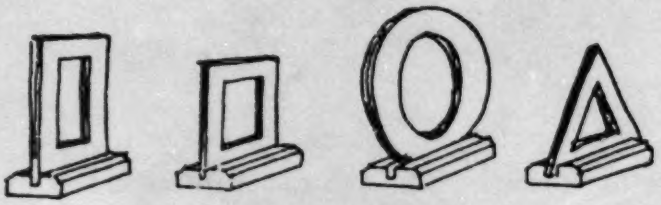
Student is weak in more than 2 of the perceptual-motor skills

Yes _____ No _____

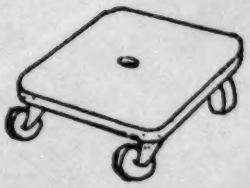
OVERVIEW OF BASIC PERCEPTUAL-MOTOR EQUIPMENT



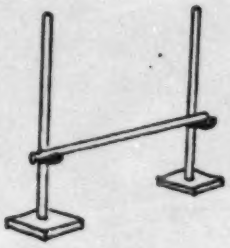
HOOP



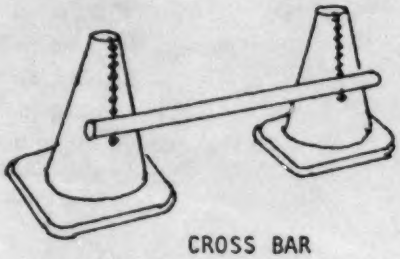
GEOMETRIC SHAPES



SCOOTER BOARD

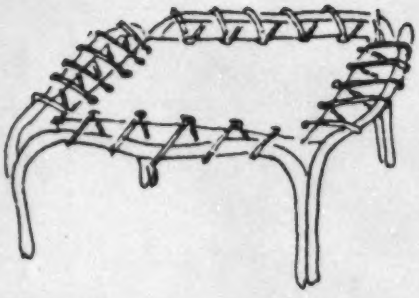


JUMP STANDARD

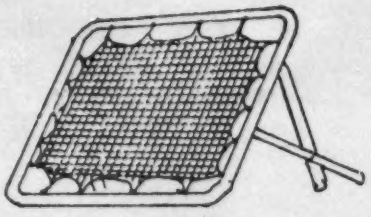


CROSS BAR

AUTO TIRE
IN SUPPORT STAND

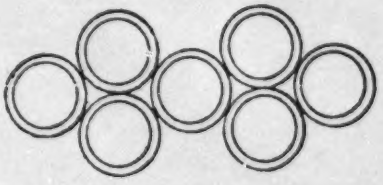


BOUNCER
(MODIFIED TRAMPOLINE)

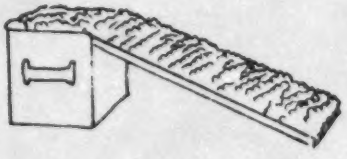


REBOUND NET

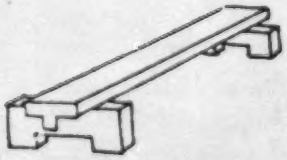
LAUNCHING BOARD



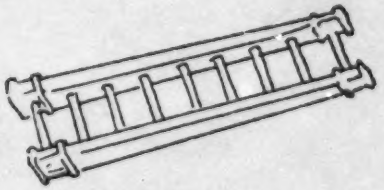
BICYCLE TIRE PATTERN



JUMP BOX



WALKING BOARD



COORDINATION LADDER

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HOMEMADE PHYSICAL EDUCATION EQUIPMENT*

1. Hanger Badminton Rackets

Materials Needed: Old nylons, coat hanger (wire), masking tape.

Instructions:

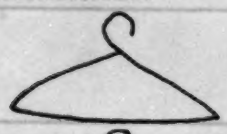


Figure A

1. Bend hanger into a diamond shape.
2. Bend the hook into a continuous loop, forming a foundation for a handle.
3. Pull nylon over hanger, beginning away from the handle, until the toe of the nylon is as tight as possible against the point of the hanger.
4. Hold the nylon at the neck of the wire with one end while wrapping the nylon around the handle to form as smooth a surface as possible.
5. Complete the racket by wrapping tape around entire handle area to form a hard surface.

2. Newspaper Balls

Materials Needed: Three sheets of newspaper and masking tape.

Instructions: Use three "opened out" newspaper sheets. Crush one tightly. Place inside second sheet and crush again. Place this inside third sheet and crush tightly again, shaping it to form a ball. Cover completely with masking tape. If desired, spray with enamel to add color and durability. Size of ball depends on how many sheets of newspaper are used.

3. Yarn Balls

Materials Needed: One skein of wool-worsted yarn, heavy duty thread or dental floss, and a piece of cardboard cut in 7-1/2 cm by 7-1/2 cm square.

Instructions: Wrap yarn around the cardboard approximately 35-50 times. Tie all strands securely and cut yarn exactly opposite of the tie. You will have something which resembles Figure B.

Figure B

*At time of publication, many of the items listed under "Materials Needed" had not been converted to metric. The sizes quoted are those currently available.

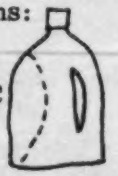
Begin by tying two of these together, break the thread, add the third, etc. Each must be individually added and tied in order to form a center core which gives some weight to the ball.

4. Scoops

Materials Needed: Plastic bleach bottles with handle (one or two quart size).

Instructions: Cut bottle on the side opposite the handle so that it is open on one side making a scoop.

Figure C



5. Hula Hoops

Materials Needed: Eight feet of 3/4" plastic plumbing pipe (purchase in one hundred foot rolls). Two and one half inches of 4/8" wood doweling.

Instructions: Cut plastic plumbing pipe ends square. Insert doweling in pipe ends. Glue and/or staple in place. May also use plastic couplings to hold pipe ends together.

6. Wands

Materials Needed: 36 inch long doweling (at least 3/4"). Old broom handles brought from home are excellent substitutes.

Instructions: Sand rough edges. Can be painted bright colors. Enamel paint works well.

7. Chinese Jump Rope

Materials Needed: Dressmaker's elastic approximately 12 feet long and 1/4" wide; thread.

Instructions: Tightly secure the two elastic ends together, making a loop of about six to ten feet.

8. Balance Beam

Materials Needed: 2" x 4" lumber (preferably ten feet long).

Instructions: Cut to desired length and sand. Can be placed directly on floor or on simple stands.

9. Tin Can Stilts

Materials Needed: 2 Crisco cans (2-lb. can works well). Regular clothesline rope.

Instructions: Punch two holes on opposite sides of the can as close to bottom as possible. Insert a piece of rope through these holes and tie securely. The rope should be tied so that it is about fingertip length when the child is standing on the cans. By placing the plastic tops on the cans, slipping and marring of the floor can be prevented.

10. Scooter Boards

Materials Needed: A sink hole obtained from the scraps of a new home; 4 ball-bearing casters.

Instructions: Sand edges of sink hole. Attach casters to bottom of sink hole; place casters far enough apart to provide a stable base.

11. Rhythm Instruments ("Shakers")

Materials Needed: 2 plastic margarine containers, beans, and tape.

Instructions: Place beans inside margarine bowls. Replace lids. Put 2 bowls together (lid to lid) and fasten them together with mystic or masking tape.

12. Punching Bag

Materials Needed: Vegetable string bag (as used to hold onions, oranges, pecans, etc.) and newspapers.

Instructions: Stuff bag with newspapers. Suspend from doorway for children to punch.

13. Plastic Grids

Materials Needed: Sheets of 54" wide heavy clear plastic, available in discount stores, or 24" wide ribbed runners from hardware or paint stores.

Instructions: Lay out the materials to provide a variety of perceptual-motor experiences involving ground-pattern recognition, laterality training, directionality, recognition of letters and numerals, sequential learning, gait training, body image gross-motor skills, coordination and balance.

Appendix C

GROSS-MOTOR ACTIVITIES - BASIC PACKAGE

There are six lesson plans in this package. Please use all six in order. They each will take 20 to 30 minutes. Feel free to modify to suit the time you have with the children. Repetition is needed in all the activities. Allow time for practice.

Indicate at the bottom of each sheet which activities were fun and successful and which were not enjoyable or frustrating to the children.

The following equipment will be needed throughout the six lessons:

1. Line on the floor
2. Gymnastic bench
3. Bean bags
4. Kindergarten blocks
5. Round balloon
6. Paddle bats, wax paper roll
7. Chairs (solid legs)
8. Wool balls
9. Eighteen centimetre play ball
10. Balance puzzlers
11. Hoops
12. Gymnastic mat
13. Tin can stilts
14. Footprints

A. Lesson 1

1. Body Image

a) Touch head, shoulders, hips, knees, waist, elbows, ankles, heels, chest, neck in Simon Says - Do this, Do that.

b) Leader points to a part of the body (his or her own or in a picture) and child names the part.

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2. Balance

a) Stand on your right foot. Try not to move. Stand on your left foot. Hold for five seconds. Now hold for as long as you can.

b) Stand on a line left foot in front of right foot (heel to toe). Hold as long as you can. Switch right foot in front of left.

c) Walk along the balance bench stepping over obstacles, e.g., blocks, bean bags. Keep eyes up; take small steps.

3. Eye-hand Coordination

a) Large round balloons
- Keep the balloon in the air any way you can. Count the number of hits you make.
- Hit the balloon as hard as you can. Hit it as softly as you can.
- Soft taps. Keep the balloon close to you.

---

4. Locomotion

a) Jump several times in succession.
b) Jump as high as you can, landing softly, knees bent.
c) Jump forward, sideways, backward.
d) Jump as far forward as you can in one jump (standing broad jump).
e) Try to jump in place and then do a half turn.

B. Lesson 2

1. Body Image

a) Touch your elbows to the bench.
b) Touch your head to a red line.
c) Touch your side to a cupboard.
d) Lie down on one side.
e) Put your heel on your knee.
f) Put your thumbs on your hips.
g) Leader makes a shape - child copies shape, e.g., curved, straight, twisted, crooked, narrow, round.

2. Balance

a) Balance on tiptoes. Hold as long as you can.
b) Balance on your heels for as long as you can.
c) Move from your heels to your tiptoes slowly.
d) Walk along the narrow side of the bench carrying a floor hockey stick.
e) Walk along the narrow side of the bench carrying a bean bag in each hand.

3. Eye-hand Coordination

a) Round balloons
   - Tap the balloon. Keep it in the air in front of your body.
   - Try to keep the balloon in the air to the left of your body; to the right of your body.
b) Tap the balloon back and forth with a partner. Keep track of the number of hits made. Tap with hands, then a paddle bat, ruler, wax paper roll, etc.

4. Locomotion

a) Hop on spot holding teacher's or partner's hands. Count number of hops.
b) Hold back of chair and hop on the spot. Change feet. Hop three times on right foot, three times on left foot. Establish a rhythmic pattern.
c) Hop a short distance to a target, e.g., a chair. Hop around the chair. Try both feet.
d) Hop for a distance (both right and left feet).

C. Lesson 3

1. Body Image

a) Bend at your waist. How many ways can you bend, e.g., forward, backward, sideways? How many other ways can you move at the waist, e.g., rotate clockwise, counterclockwise, slowly, quickly?
b) Can you make your hands higher than your head?
c) Can you make your feet higher than your head?
d) Can you put your hands under your feet?
c) Can you put your heels behind your body?

2. Balance

a) Stand on a block, balancing on one foot for as long as you can. Do the same on the other foot.
b) Balance a bean bag on your head while standing on one foot.
c) Balance a bean bag on your elbow, ankle, heel, etc.
d) Walk along the narrow side of the bench sideways. First step together then cross over.

3. Eye-hand Coordination

a) Toss and catch a wool ball. Count number of successful catches.
b) Toss wool ball high and catch.
c) Toss wool ball softly and low.
d) Toss - clap - catch.
e) Toss - jump - catch
f) Toss - turn - catch.

4. Locomotion

a) Run on the spot, first slowly, then quickly and softly.
b) Free running in gym - quick stops - freeze on signal, e.g., drum beat or clap.
c) Run forward sideways.
d) Run slowly zigzag through an obstacle course (use chairs, pylons).

D. Lesson 4

1. Body Image

a) Make yourself as small as you can. Curl up in another shape. Can you move in this shape?
b) Stretch your body as far as you can. How high can you stretch? Can you stretch another way, e.g., wide, low?
c) Can you move in a stretched position?

2. Balance

a) Balance on two hands and one foot, then as follows:
- two knees and two elbows;
- head and two knees;
- one hand and two feet;
- one hand and one foot;
- one knee and one hand.

Hold each of the above for five seconds or longer.

b) Walk along the bench (wide side with tape line):
- forward, sideways, backward;
- with arms in different directions, e.g., on hips, on head, behind back, out to sides, pointing to ceiling, folded across chest.

3. Eye-hand Coordination

a) Wool ball and target
- Toss at a target, e.g., wall, aim at colors, shapes, numbers, letters.
- Toss into a target, e.g., basket. Change distances.

b) Move with yarnball balanced on different body parts, e.g., elbow, shoulder, head, neck, knee, back, feet, front, side.

4. Locomotion

a) Jump and make a shape in the air, e.g., straight, star, bent.
b) Jump forward holding a bean bag between your knees.
c) Hop on one foot turning as you hop. Repeat on other foot.
d) Hop three times on right foot, twice on the left.
e) Skip forward slowly knees high.
f) Hold ball at waist level. Alternate knees contact ball when step hopping.

E. Lesson 5

1. Body Image

a) Each child has a chair (four solid legs). How many ways can you go under the chair - (back to front, side to side, back to side, front to side, on your front, on your back, on your side - feet first, head first, etc.)?
b) How many ways can you go over the chair - (side to side, on your back, back to front, on stomach)?
c) How many ways can you go around the chair without touching it (walking, skipping, running, hopping, etc.)?

2. Balance

a) Balance Puzzler
- Check for symbol understanding.
- Balance on three different patterns for at least seven seconds each.

b) Half and half movements
Children go halfway across the bench using a selected movement then change to another type of movement for the rest of the way, e.g., walk forward, halfway turn, and walk backwards to the end of the bench.

3. Eye-foot Coordination

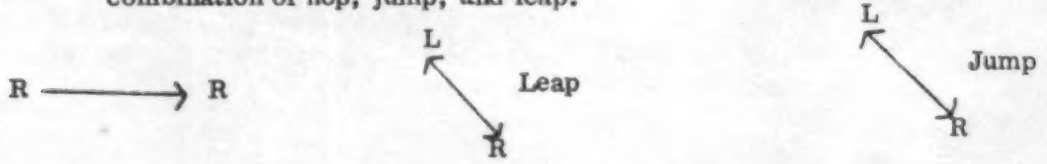
a) Push yarn ball across room using alternate feet.
b) Kick yarn ball at a target.
c) Move yarn ball with your feet in ways other than kicking, e.g., balance on foot, hop with it between feet.

4. Locomotion

a) Jump around the outside edge of the hoop. Try not to touch the hoop.
b) Stand in the hoop and jump out forward, backward, sideways.
c) Jump in and out of the hoop slowly, then quickly. Alternate rhythm.
d) Run slowly toward the hoop and jump into it landing softly in a crouch position.
e) Hop in a zigzag pattern over a line. Repeat using both feet.
f) Hop over skipping jumps lined up closely together. Repeat using both feet.
g) Make a running pattern, e.g., straight line, curved line, letters of alphabet.

F. Lesson 6

1. Jumping onto bench. Use hands for support first; bunny hop along bench.
2. Hands supporting, jump onto bench, feet together; jump off bench - feet apart.
3. Mule kicks along bench - hands on bench, feet go side to side along the bench, travelling along bench.
4. Lay out footprints (or rubber non-slip substitute) in pattern using a combination of hop, jump, and leap.



5. Skip forward, backward to the left, to the right.

Appendix D

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